CEREAL RUST BULLETIN

Report No. 1

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Issued by:

Cereal Disease Laboratory
U.S. Department of Agriculture
Agricultural Research Service
University of Minnesota
1551 Lindig St, St. Paul, MN 55108-6052

(612) 625-6299 FAX (651) 649-5054
markh@cdl.umn.edu

For the latest cereal rust news from the field, subscribe to the cereal-rust-survey mail list. To subscribe, send an ema message with the word *subscribe* in the message body (not subject line) to:
cereal-rust-survey-request@coafes.umn.edu

Reports from this mail list as well as all Cereal Rust Bulletins are maintained on the CDL website (http://www.cdl.umn.edu).

- Wheat leaf rust is light and widespread throughout the southern U.S.
- Wheat stripe rust is found in fields and plots in Texas and Louisana.
- Crown rust is light on susceptible oat in southern Texas and Louisana.

The winter of 2001-02 was warmer and drier than normal throughout much of the southern wheat-growing area of the United States. In early March,some of the southern hard red wheats were damaged because of cold weather. In Kansas and Oklahoma, conditions have been drier than normal and much of the wheat crop is in poor to fair condition.

Wheat stem rust. As of March 20, no wheat stem rust has been reported in the U.S.

Wheat leaf rust . In early January, traces of leaf rust were found in a nursery in central Texas and by the second week in February 80-100% severities were observed on lower leaves and 30% severities on the upper leaves in the same nursery. The cold temperatures in early March damaged leaves and thereby destroyed much of the rust infected leaf tissue. During the third week in March rain fell in central and southern Texas which improved conditions for rust development.

By the second week in March, light amounts of leaf rust were found in a few fields in central Oklahoma.

In late January, leaf rust was reported on the cultivar 'Shelby' in northeastern Louisana plots. In mid-February, 20% severities were observed on susceptible cultivars in southern Louisana. Wheat leaf rust was more severe than last year on this same date. In mid-March, it

was noted that the cold weather had set back leaf rust in the southern Louisana plots.

In mid-December, leaf rust development was uniform on the lower leaves on wheat in a northeastern Arkansas field. In mid-January light leaf rust infection levels were observed on entries in a nursery in southwestern Arkansas. In mid-February, leaf rust was found in light amounts throughout Arkansas in plots and fields. By the third week in February, leaf rust that overwintered was observed on wheat in a field in northwestern Arkansas and in plots of wheat in southwestern Arkansas. By mid-March because of the cold weather there were no signs of leaf rust in northwestern Arkansas wheat plots.

In mid-December leaf rust was easily observed in the variety Saluda at Kinston, North Carolina.

During the second week in February, light amounts of leaf rust were found on the cultivar Coker 9835 in a south central Georgia nursery. By late February, rust levels were severe in the vicinity of the initial focus indicating this was likely an overwintering site.

In 2002, leaf rust has developed earlier than normal and was more widespread and more severe than last year in the southern United States. However, cool temperatures in early March has set back the leaf rust development throughout the southern U.S.

Wheat stripe rust. In mid-January, hot spots of stripe rust (70 to 80% severities) were found in central Texas wheat plots. According to Dr. Rollie Line, this is a classic example of overwintering stripe rust and the result of primary infection not long after the plants emerged last fall. Stripe rust development was much earlier in these plots than last year. In early February, stripe rust was at light levels in plots in southern Texas. By early March, stripe rust was slowed by cold temperatures in southern Texas plots but still was uniform across the nursery at 50-70% severity on lower leaves. The cold temperatures in early March damaged leaves and thereby destroyed much of the rust infected leaf tissue and stripe rust infections were spotty.. During the third week in March rain improved conditions for rust development in much of central and southern Texas. Stripe rust requires cool temperatures (generally less than 70 F) and moist conditions for infection and development.

From initial collections made in central Texas race PST-79 was identified, which was very prevalent in Texas and the Great Plains last year.

By the third week in February, stripe rust that overwintered was observed on wheat in a field in northwestern Arkansas and hot spots of rust infection(foci) were found in plots of wheat in southwestern Arkansas plots. In mid-March, cold temperatures had killed the stripe rust in northwestern Arkansas plots.

In mid-March stripe rust was severe in observation plots in southern Louisana nursery.

This year stripe rust is widespread which is similar to last year and seems to have survived the cold temperatures in early March in greater amounts than leaf rust. If the temperatures remain cool(less than 70 F) and moisture is present more rust will develop.

Please send wheat and barley stripe rust collections (5 or more rusted green leaves) after collection as soon as possible (using an overnight courier service if possible) to:

Dr. Xianming Chen
USDA-ARS
361 Johnson Hall
P.O. Box 646430
Washington State University, Pullman
WA 99164-6430
email: xianming@mail.wsu.edu

Note: Stripe rust is vulnerable to heat and does not survive long at warm temperatures; therefore, if shipment of collections for race identification is delayed, their viability will be poor.

Oat stem rust. There have been no reports of oat stem rust in the U.S. as of March 22.

Oat crown rust. In early February, crown rust was found in fields in southern Texas.. In mid-March, crown rust had been set back by the cold weather and was hard to find in southern Louisiana plots.

Barley rusts. There have no reports of barley rust in the U.S. as of March 22.

Rye rusts. There have been no reports of rye rust in the U.S. as of March 22.

Special Notes:

Distribution of Cereal Rust Bulletins

If you currently receive the Cereal Rust Bulletin by U.S. mail, but would prefer to receive it by email or receive email notification when it is posted on our website, please send a message to Mark Hughes (markh@cdl.umn.edu).

Current cereal rust situation

Cereal Rust Bulletins are distributed every two weeks on average, for the latest cereal rust news, subscribe to the cereal rust survey mail list. Instructions can be found at: http://www.cdl.umn.edu/mail_lists/CRBmail.html. Or, if you prefer, simply send a message to Mark Hughes and he will add you to the mail list. Messages from the mail list are also maintained on the CDL website (http://www.cdl.umn.edu/CRB/updates.html).

If you have information on the cereal rust situation (or other small grain diseases) that you would like to share, please email your info to:
Mark Hughes (markh@cdl.umn.edu) and David Long (davidl@cdl.umn.edu)
Or
cereal-rust-survey@coafes.umn.edu
Or, if you prefer,
call Dave (612-625-1284)

We would like to include your name and email address so others could contact you. If, however, you prefer not to have your name or email address appear with the information, we will omit them. Of course, we will continue to incorporate these reports into the Cereal Rust Bulletin.
Information of most importance
We welcome any information you can provide, but are particularly interested in:

- Rust (leaf rust, stem rust, stripe rust)
- Host (wheat, oat, etc.)
- Cultivar or line name if known
- Severity and prevalence
- Growth Stage -when rust likely arrived, when infection first noted and current stage
- Where rust is found on the plants, e.g., lower leaves, flag leaf, etc.

Rust collections
Reports on distribution of races of cereal rust fungi are an important part of our surveys as reported in the Cereal Rust Bulletin. We regularly collect and test isolates of stem rust (wheat, oat, and barley), wheat leaf rust, and oat crown rust. We appreciate receiving collections of these rusts from cooperators around the U.S. If you would like to contribute, please contact Dave Long or Mark Hughes, and they will send you a packet of collection envelopes and forms.